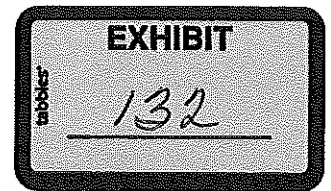


THE AVON WATER COMPANY

14 WEST MAIN STREET • P. O. BOX 424
AVON, CONNECTICUT 06001-0424



PHONE (860) 678-0001
FAX (860) 678-0521
avonwater@snet.net

February 2, 2010

BUREAU OF WATER PROTECTION AND PLANNING
PLANNING & STANDARDS DIVISION

FEB 02 2010

Mr. Paul Stacey, Hearing Officer
State of Connecticut
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

Re: Proposed Streamflow Regulations

Dear Mr. Stacey:

Attached is a description of streamflow augmentation, which should be considered as an alternative to reduced well pumping.

As an example 100 GPM of 50° water put back into the stream may have a greater impact on aquatic life than a 200 GPM reduction in well pumping. The impact on the stream is immediate and significant with the augmentation where as the ground water recharge to the stream takes longer and may not enter the stream where needed most.

Thank you for considering this approach.

Very truly yours,
THE AVON WATER COMPANY

A handwritten signature in black ink, reading "Robert W. Wesneski".

Robert W. Wesneski
President

RWW:dcd
enc.

MITIGATION OF STREAMFLOW DEPLETION VIA GROUNDWATER AUGMENTATION

PROBLEM: Groundwater withdrawals for public water supply purposes may cause reductions in streamflows during critical low flow periods, thereby potentially impacting fish and aquatic life instream.

CTDEP APPROACH: The CTDEP is promulgating regulations which may require reductions in groundwater withdrawals to minimize the potential impacts to fish and aquatic life during low flow periods. It is unclear at this time how these restrictions will be implemented. The CTDEP may simply cap the summertime withdrawal rate based on flow statistics as defined in the proposed Streamflow Regulations or may require temporary reductions in withdrawal rates when certain flow triggers are reached.

ISSUES: (1) If withdrawal rates are capped for an entire potential low flow period, July-October, for example, then the water utility and the public lose the benefit of the water lost by pumping at the reduced rate, whether or not an adverse impact is occurring, as would be the case in during periods which are wetter, and in which flows are higher, than the "critical flow period". The "critical flow period is defined by the CTDEP in the proposed regulations as the period when stream flows are naturally at a recurrence interval which is equaled or exceeded 99% of the time. Thus, 99% of the time, there would theoretically be no need to curtail withdrawals.

(2) If withdrawal rates are required to be reduced only when the streamflow drops below the 99% recurrence level, the potential benefits of the flow reduction, adequate water quantity, are not received at the right place or at the right time. Only a small fraction of the flow reduction will be realized instream in the short term; full recovery of the lost surface water will not occur until the fall recharge period, typically late October-November, when the streamflows also rebound dramatically and the ground water is no longer a significant percentage of flow.

(3) Instream water temperature is an important factor in the survival of cold water fish, which are presumably a principal concern to the CTDEP in deriving minimum flow standards. Reducing ground water withdrawals provides little or no instream temperature benefits, for the same reasons as noted in (2) above. Direct discharge of ground waters to the stream during these critical low flow and high temperature periods, on the other hand, provides an immediate and direct influx of cold water (typically about 50 degrees Fahrenheit).

CONCLUSION: The CTDEP should consider the benefits of ground water flow augmentation as an alternative to reduced ground water withdrawals currently being considered in the proposed Streamflow Regulations. Important criteria that should be met in considering ground water flow augmentation would be to demonstrate that the ground water storage depletion due to the combined effects of the water supply withdrawal and the flow augmentation is fully replaced prior to the next growing season or hydrologic year. Many states in the central and western United States are studying and implementing this concept and it should be seriously evaluated as part of the Streamflow Regulation and Diversion Permit process in Connecticut.